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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kenji Okada

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EXAMINER

JONES JR., ROBERT STOCKTON

ART UNIT

PAPER NUMBER

1762

MAIL DATE

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08/09/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,863	Applicant(s) OKADA ET AL.	
	Examiner ROBERT JONES JR.	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 1-48 and 67-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 49-66 is/are rejected.
- 7) ☒ Claim(s) 53 and 54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group IV, Claims 49-66 in the reply filed on 26 July 2011 is acknowledged. As per the Applicant's response, the Examiner agrees that Claims 63 and 64 are properly included in Group IV.

Claim Objections

2. Claims 53 and 54 are objected to because of the following informalities: The preliminary amendment to Claims 53 and 54 corrected issues with multiple dependency. However, both claims still contain the phrase "any one of". As Claims 53 and 54 are now dependent upon a single claim, deletion of this phrase is recommended. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 49-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 49 includes the phrase “a cured product prepared from the polymer showing higher oil resistance than that of a cured product from a composition containing a butyl acrylate homopolymer having the same structure” (underline added). Based on the wording of the claim, it is unclear which must have the same structure: the cured product (having the same physical structure), or the butyl acrylate homopolymer (having the same chemical structure). The two possible interpretations of this claim limitation render Claim 49 indefinite. Claims 50-66 refer back to or otherwise require all limitations of Claim 49, and are therefore similarly indefinite.

6. Claim 59 requires a halogen group-terminated (meth)acrylic polymer represented by the following formula (3):



wherein R^1 and R^2 each represent a group bonded to an ethylenically unsaturated group of a vinyl monomer, and X represents Cl, Br, or I.

7. As per the claim language, formula (3) is meant to represent a polymer. However, the formula only contains one subunit and is not representative of a polymer. Additionally, although the groups R^1 and R^2 are required to be bonded to an ethylenically unsaturated group of a vinyl monomer, they are shown bonded to a single carbon atom. This is not representative of a vinyl monomer and does not contain an

ethylenically unsaturated group. Thus, the wording of the claim is not consistent with the structure pictured in Formula (3). For these reasons, Claim 59 is indefinite.

Claim Interpretation

8. Claim 49 and its dependent claims require a (meth)acrylic polymer “produced by atom transfer radical polymerization”. This represents a product-by-process limitation.

9. It is noted that “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”, *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) .

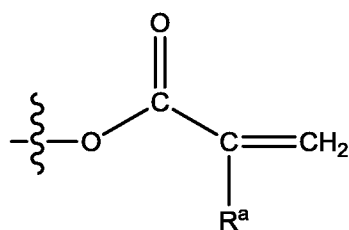
Further, “although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product”, *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

10. Absent any evidence of criticality regarding the presently claimed process, any (meth)acrylic polymer which meets the structural requirements of the claimed product will be interpreted as reading on the claimed polymer regardless of the method by which it is produced.

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11. Claims 58 and 60 as well as their dependent claims require the (meth)acrylic polymer according to claim 49, produced either by reacting a halogen group-terminated polymer with a compound represented by formula (2) (see Claim 58) or by reacting a hydroxyl group-terminated (meth)acrylic polymer with a compound represented by formula (4) (see claim 60).

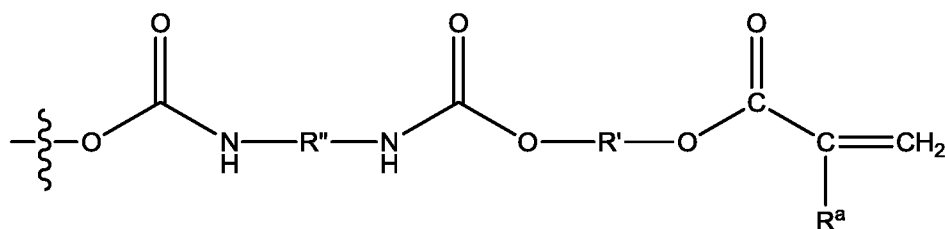
12. Both claims contain product-by-process limitations which ultimately describe an identical product. The product resulting from the process described by Claims 58 and 60 will contain a terminal moiety having the following formula:



This is identical to formula (1) required by Claim 49.

13. Absent any evidence of criticality regarding the presently claimed process, any (meth)acrylic polymer which reads on Claim 49 be interpreted as reading on the polymer of Claims 58 and 60 regardless of the method by which it is produced.

14. Claim 61 requires the (meth)acrylic polymer according to claim 49, produced by (1) reacting a hydroxyl group-terminated (meth)acrylic polymer with a diisocyanate compound, and (2) reacting the residual isocyanate group with a compound represented by formula (5). The product resulting from the process described by Claim 61 will contain a terminal structure having the following formula:



wherein R'' is the residue of a diisocyanate compound.

15. Absent any evidence of criticality regarding the presently claimed process, any (meth)acrylic polymer which contains the terminal structure shown above will be interpreted as reading on the claimed polymer regardless of the method by which it is produced.

16. Claim 62 serves only to further limit the product-by-process limitation of Claim 49. Therefore, any product which satisfies the structural limitations of Claim 49 will be interpreted as also satisfying Claim 62.

17. Claim 65 contains the limitation "for on-site forming gaskets". This represents a statement of intended use, and does not require steps to be performed or limit the claims to a particular structure. Therefore, the limitation "for on-site forming gaskets" does not limit the scope of the instant claims, and need not be taught by the prior art in order to anticipate the claims.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

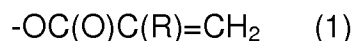
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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. Claims 49-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa et al (WO 99/43719; US 6,964,999 referred to herein as the English equivalent).

20. Regarding Claims 49-52, 54, 58, 60, and 62, Nakagawa teaches a vinyl polymer having at least one terminal group of the general formula (1) per molecule:



wherein R represents hydrogen or an organic group containing 1 to 20 carbon atoms (Abstract). Acrylic and methacrylic ester monomers are preferred monomers used to form the main chain of the vinyl polymer (col. 4, lines 31-35; col. 5, lines 14-15). Thus, Nakagawa teaches an acrylic or methacrylic polymer which has a group according to formula (1) at its terminal (molecular) end.

Nakagawa is silent with respect to the claimed physical properties. However, Nakagawa describes polymers which are structurally identical to the claimed polymers, and which are produced by an identical process. The courts have held that “a compound and all its properties are mutually inseparable”, *In re Papesch*, 315F.2d 381, 137 USPQ 42, 51 (CCPA 1963). Further, attention is drawn to MPEP 2112.01, which states that “products of identical chemical composition can not have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present.”, *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d

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1655, 1658 (Fed. Cir. 1990). Nakagawa's polymers will inherently possess the claimed physical properties. Therefore, Nakagawa as set forth above reads on all elements of Claims 49-52, 54, 55, 58, 60, and 62.

21. Regarding Claim 53, Nakagawa teaches a molecular weight distribution less than 1.8 (col. 5, lines 20-24).

22. Regarding Claims 56-57, Nakagawa teaches 2-methoxyethyl acrylate (col. 4, lines 43-44).

23. Regarding Claim 59, Nakagawa teaches olefinic polymers having a terminal structure according to formula (3) (col. 15, lines 35-44).

24. Regarding Claim 61, Nakagawa teaches polymers obtained by reacting a hydroxy-terminated vinyl polymer with a diisocyanate compound, and subsequently reacting the residual isocyanate group with a compound represented by formula (5) (col. 18, line 65 - col. 19, line 7).

25. Regarding Claim 63, Nakagawa teaches a curable composition comprising said polymer and a photopolymerization initiator (col. 22, lines 30-35).

26. Regarding Claim 64, Nakagawa teaches a curable composition comprising said polymer and a thermal polymerization initiator (col. 23, lines 21-25).

27. Regarding Claim 65, Nakagawa teaches curable compositions containing said polymer (Abstract).

28. Regarding Claim 66, Nakagawa teaches various molded products such as gaskets (col. 23, lines 14-20; col. 24, lines 24-29).

Conclusion

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT JONES JR. whose telephone number is (571)270-7733. The examiner can normally be reached on Monday - Thursday, 9 AM - 5 PM.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RSJ

/DAVID W WU/
Supervisory Patent Examiner, Art Unit 1762

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